

IN THE CLAIMS

1. (Canceled) .

2. (Canceled) .

3. (Canceled) .

4. (Canceled) .

5. (Canceled) .

6. (Canceled) .

7. (Canceled) .

8. (Canceled) .

9. (Canceled) :

10. (Currently Amended) A method of amplifying optical signals, comprising:

transmitting a first optical signal from a first bidirectional port of a first coupler to a first unidirectional port of a second coupler connected to the first coupler by a delay element, the delay element including a pair of electrodes arranged along a first optical path between the first and second couplers to induce a phase shift in the first optical signal;

transmitting the first optical signal from the first unidirectional port of the second coupler through an amplifier to a second unidirectional port of the second coupler; and

transmitting the first optical signal from the second unidirectional port of the second coupler to a second bidirectional port of the first coupler.

11. (Canceled).

12. (Canceled).

13. (Currently Amended) The method of Claim 10, further comprising;

transmitting a second optical signal on a second optical path from a second bidirectional port of the first coupler to the first unidirectional port of the second coupler;

transmitting the second optical signal from the first unidirectional port of the second coupler through the amplifier to the second unidirectional port of the second coupler; and

transmitting the second optical signal from the second unidirectional port of the second coupler to the first bidirectional port of the first coupler.

14. (Previously Presented) The method of Claim 10, wherein the first optical signal is at a first wavelength.

15. (Previously Presented) The method of Claim 13, wherein the second optical signal is at a second wavelength.

16. (Currently Amended) A method of amplifying optical signals, comprising:

transmitting a first optical signal from at least one of first and second bidirectional ports of a first coupler to a first unidirectional port of a second coupler connected to the first coupler by delay element, the delay element including a pair of electrodes arranged along a first optical path between the first and second couplers to induce a phase shift in the first optical signal;

transmitting the first optical signal from the first unidirectional port of the second coupler through an amplifier to a second unidirectional port of the second coupler; and

transmitting the first optical signal from the second unidirectional port of the second coupler to the at least one of first and second bidirectional ports of the first coupler.

17. (Canceled).

18. (Canceled).

19. (Currently Amended) The method of Claim 16, further comprising:

transmitting a second optical signal from at least one of the first and second bidirectional ports of the first coupler to the first unidirectional port of the second coupler;

transmitting the second optical signal from the first unidirectional port of the second coupler through the amplifier to the second unidirectional port of the second coupler; and

transmitting the second optical signal from the second unidirectional port of the second coupler to at least one of the first and second bidirectional ports of the first coupler.

20. (Previously Presented) The method of Claim 16, wherein the first optical signal is at a first wavelength.

21. (Previously Presented) The method of Claim 19, wherein the second optical signal is at a second wavelength.

22. (Canceled).

23. (Canceled).

24. (Canceled).

25. (Currently Amended) An optical router, comprising:
a first bidirectional port coupled to a first unidirectional port;
a delay element coupled to the first bidirectional port and the first unidirectional port, the delay element including a pair of electrodes arranged along a first optical path between the first bidirectional port and the first unidirectional port to induce a phase shift in the first optical signal;
an amplifier coupled to the first unidirectional port and a second unidirectional port; and
a second bidirectional port coupled to the second unidirectional port.

26. (Canceled).

27. (Previously Presented) The optical router of Claim 25, further comprising:
a first optical coupler coupled to the first bidirectional port and the second bidirectional port; and
a second optical coupler coupled to the first unidirectional port and the second unidirectional port.

28. (Previously Presented) The optical router of Claim 25, wherein the amplifier is a unidirectional amplifier.

29. (Canceled).

30. (Currently Amended) The optical router of Claim 10, wherein ~~the delay element comprises at least one pair of electrodes a desired phase shift is achieved between the first and second optical signals by changing a refractive index in the first optical path in response to an electric field applied by the electrodes.~~

31. (Previously Presented) The optical router of Claim 10, wherein the first and second couplers are 3 dB couplers.

32. (Currently Amended) The optical router of Claim 10, wherein ~~the delay element is a difference in distance AL indicating a real MZI difference between the first and second couplers a supplementary time delay is achieved between the first and second optical signals in response to an electric field applied by the electrodes.~~

33. (Currently Amended) The optical router of Claim 16, wherein ~~the delay element comprises at least one pair of electrodes a desired phase shift is achieved between the first and second optical signals by changing a refractive index in the first optical path in response to an electric field applied by the electrodes.~~

34. (Previously Presented) The optical router of Claim 16, wherein the first and second couplers are 3 dB couplers.

35. (Currently Amended) The optical router of Claim 16, wherein ~~the delay element is a difference in distance ΔL indicating a real MZI difference between the first and second couplers~~ a supplementary time delay is achieved between the first and second optical signals in response to an electric field applied by the electrodes.

36. (Currently Amended) The optical router of Claim 25, wherein ~~the delay element comprises at least one pair of electrodes~~ a desired phase shift is achieved between the first and second optical signals by changing a refractive index in the first optical path in response to an electric field applied by the electrodes

37. (Previously Presented) The optical router of Claim 27, wherein the first and second optical couplers are 3 dB couplers.

38. (Currently Amended) The optical router of Claim 25, wherein ~~the delay element is a difference in distance ΔL indicating a real MZI difference between the first and second optical couplers~~ a supplementary time delay is achieved between the first and second optical signals in response to an electric field applied by the electrodes